

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001201**Date Inspected:** 25-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1430**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** 77M Mock Up & OBG**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the 77M Mock Up and the Orthotropic Box Girders (OBG).

Bay 2 77M Mock Up:

The QA Inspector randomly observed ZPMC Non-Destructive Technician Zhou Dongyun, utilizing the Magnetic Particle Testing Method to examine the tack welds attaching Skin Plates A, B and E to the 77M Diaphragm Assembly. There appeared to be no indications. The attached photograph provides additional detail.

Bay 3 OBG:

The QA Inspector randomly observed ZPMC welder Zhin Meng ID Number 053742, utilizing the Flux Cored Arc Welding (FCAW) Process with ZPMC approved Weld Procedure Specification (WPS) WPS-B-T-2132-2 in the 2F position to weld pick ups the removal of worm hole porosity and other weld dis-continuities in Weld Joint (WJ) Numbers SP003-01-001, 002, 005, 006, 009 and 010 attaching T-Ribs to Side Plate SP3/PL64A. The original welding was performed with gantry mounted automatic FCAW apparatus. The QA Inspector randomly observed ZPMC CWI Wu Ming Kai monitoring weld parameters. The weld parameters appeared to comply with contract requirements. The attached photographs provides additional detail.

The QA Inspector randomly observed ZPMC welders Wei Dashuai ID Number 051246 and Li Mengqian ID

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Number 054460, utilizing the FCAW Process with ZPMC approved WPS WPS-B-T-2132-2 in the 2F position to tack weld T-Ribs to Side Plate SP29/PL83A. The QA Inspector randomly observed ZPMC CWI Wu Ming Kai monitoring weld parameters. The QA Inspector also randomly verified welding parameters and recorded them as follows: 283 amps, 28.4 volts with a travel speed of 505 millimeters per minute (mm) for Mr. Wei and 282 amps, 28.2 volts with a travel speed of 498 mm per minute for Mr. Li. The weld parameters appeared to comply with contract requirements.

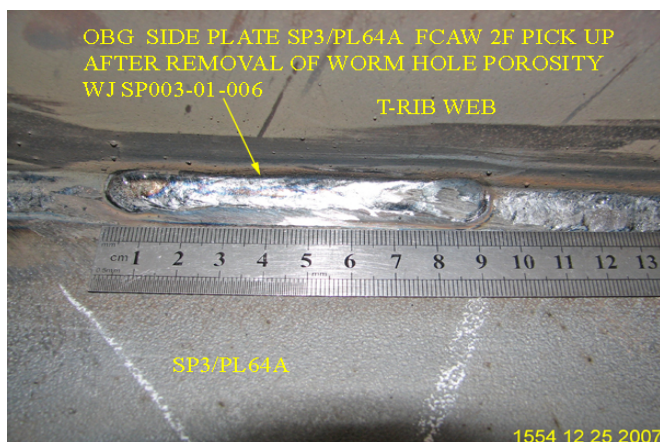
The QA Inspector randomly observed ZPMC welder He Yumei ID Number 048625, utilizing the FCAW Process with ZPMC approved WPS WPS-B-T-2132-2 in the 2F position to tack weld T-Ribs to Side Plate SP13/PL73A. The QA Inspector randomly observed ZPMC CWI Wu Ming Kai monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

Bay 7 OBG:

The QA Inspector randomly observed ZPMC welder Hong Shuili ID Number 044815, utilizing the FCAW Process with ZPMC approved WPS WPS-B-P-2132-1 in the 2F position to weld Flange Plate X7M to Floor Beam Web FB008-02 at WJ FB008-02-003, 009 Plates X94A + X47A + X15A. The QA Inspector randomly observed ZPMC CWI Hu Wei Qing, monitoring weld parameters. The QA Inspector also randomly verified welding parameters and recorded them as follows: 295 amps, 29.4 volts with a travel speed of 547 mm. The weld parameters appeared to comply with contract requirements.

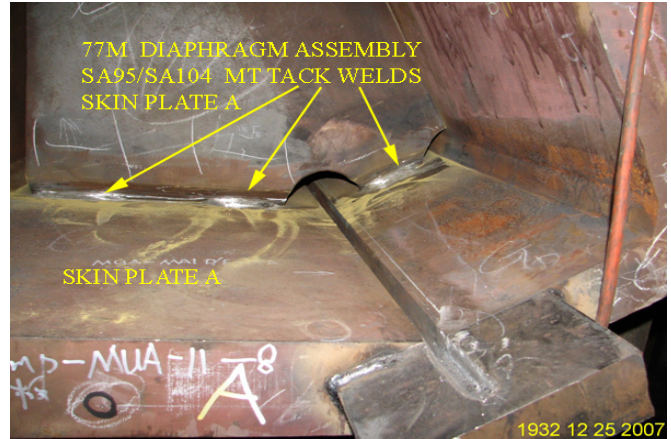
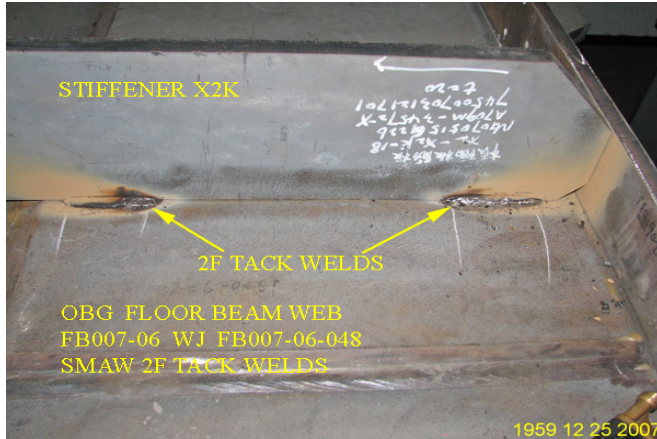
The QA Inspector randomly observed ZPMC welder Ren Jimzhu ID Number 044837, utilizing the Shielded Metal Arc Welding (SMAW) Process with ZPMC approved WPS WPS-B-P-2122 FCM in the 2F position to tack weld stiffeners piece marks X2E, X2F and X2H to Floor Beam Web FB007-06 at WJ's FB007-06-047, 048 013 and 014.

The QA Inspector randomly observed ZPMC CWI Hu Wei Qing, monitoring weld parameters. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.



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Summary of Conversations:

ZPMC Quality Representative Eric Xu, informed the QA Inspector that ZPMC Quality Control had completed the final Ultrasonic Testing Inspection of the welds on 89M Mock Up, Skin Plate D and Corner Splice Plate Sub-Assembly SA24-2 in Bay 2.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Franco, Charlie

Quality Assurance Inspector

Reviewed By: Cochran, Jim

QA Reviewer